
IN THE SENATE OF THE UNITED STATES.

FEBRUARY 5, 1894.—Referred to the Committee on Naval Affairs and ordered to be printed February 7, 1894.

Mr. HALE presented the following

**STATEMENT TO ACCOMPANY A PROPOSED BILL ENTITLED "A
BILL TO REORGANIZE AND INCREASE THE EFFICIENCY OF THE
PERSONNEL OF THE NAVY."**

The principal and guiding considerations in developing the proposed plan or reorganization of the Navy have been prompted by a sincere desire to increase the military efficiency of the service in administrative matters and for fighting on board ship, to give due weight to the necessity of economy in the public expenditures, to avoid doing any injustice to any individual or corps, to propose no changes of doubtful efficacy, and to remove, as far as possible, all causes of contention among these several corps.

In this paper no attempt is made to advance all the detailed arguments in favor of the proposed changes. It is merely explanatory of the proposed bill, and gives only the principal reasons for the changes advocated.

The first problem presented for solution was to propose a satisfactory plan for the reorganization of the active list of the line. This is a most difficult and important subject, and a few words of explanation of the causes that have led to its present deplorable condition will assist in forming a conclusion as to the efficacy of the proposed remedy.

The great block to promotion that now exists in the line was primarily caused by commissioning the huge classes that were graduated from the Naval Academy in the years of 1864 to 1870, inclusive. These seven classes, now on the active list of the line of the Navy, fill the entire grades of commander and lieutenant-commander and include the senior hundred lieutenants, numbering in all 235 officers (without including 25 volunteer officers), or 33 per cent of the whole active list of the line. The class of 1864 has reached the captain's grade at the average age of 50; the class of 1870 are near the middle of the lieutenant's list at the average age of 43, with the prospect, under existing laws, of reaching the captain's grade at the average age of 60. As this block moves toward the head of the list it will occupy all the grades from rear-admiral to lieutenant-commander, and as the class of 1864 begins retiring at the age of 62, the class of 1870 will be in the lieutenant-commander's grade at the average age of 55.

Notwithstanding this lamentable condition of the active list of the line of the Navy, which has been repeatedly called to the attention of Congress by different Secretaries, there have been but two Congressional acts

during the past twenty-five years that have affected promotion in the line; one in 1870 that largely increased the number in the lower grades, and one in 1882 which greatly decreased the number in the upper grades. (A table showing the effect of these acts on the different corps will be found near the end of this statement.) Both of these acts were simple and direct methods of further impeding promotion to the command grades, and consequently the trouble has been all the more aggravated. The difficulty can not now be entirely removed without resorting to radical measures that would be expensive to the Government and that would probably do injustice to many deserving officers of long and faithful service. Therefore a plan is presented that will partially relieve the present stagnation in promotion, without interfering with the long-established system of promotion by seniority, and at the same time will serve as a good working plan for increasing and regulating the flow of promotion, enabling officers to reach the command grades at an earlier age than is possible under the present system.

Briefly stated, the plan consists in slightly increasing the proportion in the upper grades, providing for a system of limited compulsory retirements from the grades of captain, commander, and lieutenant-commander, and limiting the maximum number of annual entries in the corps. The numbers in the several grades are fixed so as to cause an officer to serve a certain period of time in each grade. The only temporary expedient connected with the proposed plan, in order to partially relieve the present block in promotion, is to carry 25 volunteer officers as supernumeraries in the command grades; this answers very well, as the majority of them will be retired for age within the next six years.

The following table gives the average ages at which officers reach the several grades at the present time, and their average ages in 1904 under the present and proposed systems, as well as in 1914 when the proposed system would be in normal working order:

	Present.		Proposed.	
	1894.	1904.	1904.	1914.
Rear-admiral.....	61	61	60	58
Commodore.....	59	60	.....	.....
Captain.....	50	58	56	52
Commander.....	48	56	49	46
Lieutenant-commander.....	46	51	42	39
Lieutenant.....	36	32	29	29
Junior lieutenant.....	33	28	25	25
Ensign.....	22	22	22	22

In order to have an officer serve four years in the flag grades, it was found that there must be at least 20 in the flag officers' grade, as by retaining both the grades of rear-admiral and commodore it would be impossible for the average officer to make a full cruise as either, and it is desirable that rear-admirals should command our sea stations, which can only be accomplished by an officer attaining that rank upon reaching the flag grade. This has long been the English system. The number in the grade of captain is increased from 45 to 65, in order to give a longer period of service in the grade, and partly on account of the increase in captains' commands. The number of commanders is reduced by 5; the lieutenant-commanders are increased from 74 to 135, so that commanders of small vessels, all of the executive officers, and the navigators of the largest class of ships may be selected from this grade. The numbers in the subordinate grades

were assigned so as to keep the proper proportion and length of service in the grades.

The number of flag officers required being very much smaller than the number of commanding officers, and the number of the latter required being much less than the subordinate officers, it has been provided that compulsory retirements should be made from the grades where the decrease in number is required.

It has been found by close calculation that the proposed system of compulsory retirement would not greatly increase the annual appropriation for the pay of the retired list, as it would decrease the number of rear-admirals retired, and though the compulsorily-retired commanding officers and lieutenant-commanders would be on the retired list for a longer time, their retired pay would be much smaller than the rear-admirals' retired pay. The increased amount for the pay of the retired list caused by the proposed system of compulsory retirement would be more than offset by the reduced pay of the active list, as that system would at the same time reduce the average length of service of the active list, which would, under the proposed pay table, reduce the pay.

As it is proposed by the bill to allow the marine and pay corps to die out and for line officers to do the duty now assigned them, it has been recommended that the 33 junior marine officers and the 23 junior engineer officers, all of whom are graduates of the Naval Academy, be transferred to the line, increasing the total number in the line to 775; an increase of 51 officers. The transfer of these junior officers to the line serves an admirable purpose in filling out those classes which are now very short, as shown by the chart which graphically illustrates the numbers in the several classes on the active list, and this will greatly assist in getting the proposed plan of promotion in normal working order.

Taking the whole number of line officers as the correct basis for determining the number of medical officers required, and considering 2 medical officers to every 12 line officers (the average complement of a vessel), a liberal allowance, it was found that the total number should be 130, which requires a decrease of 36 in the present number. This number was divided in grades, in the same proportions as the proposed grades of line officers, as follows: Captains, 11 per cent; commanders, 11 per cent; lieutenant-commanders, 18 per cent; lieutenants, 33 per cent; junior lieutenants and ensigns, 27 per cent. This agrees with the several percentages in the line, excepting rear-admirals, 3 per cent; and captains, 8 per cent; these were added together and assigned to the senior grade of the staff corps in grades, which makes as even a division of rank as possible without giving the staff corps flag grades, which would cause an anomaly, as there is no duty to assign such a grade in the staff corps, with the single exception of chiefs of bureaus, and they are given the relative rank of rear-admiral by the proposed bill.

The pay corps is divided in grades according to the same rules applied to all other corps, and it is recommended there be no further entries in the corps, the work now assigned that corps to be gradually assumed by line officers. The duties of a paymaster on board ship require but little of his time, and could be performed by a line officer in addition to other duties, such as the duties of ordnance or torpedo officer. He could also have charge of a division of men, and would be assigned a station at general quarters for action. This would directly increase the fighting efficiency and would add another officer available, in the order of military succession, to take command of the ship. A paymaster is now appointed from civil life (without any special

training), and there can be no doubt that graduates of the Naval Academy are thoroughly capable of performing their duties ashore and afloat.

The marines have been of great service in days gone by—in the days of press gangs and mutinies—but at the present time, when the Navy, on account of the higher pay, is enabled to get a class of men for sailors superior to the marines as a rule, their day of usefulness at sea has gone by. The marines are a disintegrating element on board ship, a small separate corps placed on board every vessel to perform guard duty over the main body of men, that wields and directs all the ponderous, complicated, and delicate machinery connected with the armament and engines of a modern man of war. Such men are amenable to military training and discipline, though little can be done in the way of impressing upon them a proper sense of their important military duties and responsibility so long as a separate corps is sent to sea to perform guard duty over them. Besides, the marines perform but little of the immense amount of routine work done on board ship, consequently the working efficiency of every crew will be increased wherever a marine is displaced by a sailor. This means a direct increase of military efficiency in many important operations, such as coaling ship, taking in ammunition, stores, etc., which must often be performed with the utmost dispatch in time of peace as well as in war.

The only duty required of the marines on shore is to guard the property at the several navy yards and shore stations, which, it is believed, would be efficiently protected by the corps of watchmen provided for by the bill; besides, the proposed system would give excellent opportunity for training the enlisted men of the receiving ships in performing guard duty during the day. The proposed plan would be much more economical, as the annual appropriation for the Marine Corps is about \$1,000,000, while the corps of watchmen would cost, it is estimated, about \$125,000 per annum. The bill provides for gradually increasing the force of enlisted men of the Navy by 2,000, as the Marine Corps is reduced. Two thousand additional men are absolutely necessary to man the new vessels now being completed.

The plan proposed provides for no enlistments or reenlistments in the Marine Corps, which would practically deplete the Corps in about three years, as the average number of desertions for the past ten years has been each year more than 25 per cent of the whole number in the Corps. The best of the enlisted men could be appointed watchmen and any of them that so desired could enlist in the Army with all the privileges of continuous service and retirement that would have accrued to them in the Marine Corps. So the proposed plan would cause no hardship to the enlisted men. The 33 junior officers are transferred to the line, and the remaining 40 officers continue in the active list to be assigned such duty as the Secretary of the Navy may direct. Their promotion, pay, and emoluments are not affected in any way, and nearly all would retire on account of age in a few years. Guarding navy-yards is duty that should naturally be performed by enlisted men of the Navy, and such shore billets serve as a natural and excellent means of rewarding men in the Navy for long and faithful service.

The Engineer Corps is recommended to be reduced from the present number, 183, to 80, to form a corps of designing and constructing engineers and to superintend the machinery of larger vessels. A corps of warrant engineers is provided to take their places in the engine room. The system proposed is intended to obtain practical mechanics for running the engines; the class of men who run the engines of all the mer-

chant steamers and who perform the same kind of work in every branch of civil life. This is only adopting the plan that has worked successfully in the French, Italian, and German navies for several years, and which England is gradually adopting. The warrant engineers are also intended to take the place of the machinists now employed in the Navy, and probably about the same number will be required. They would be a most valuable class of men on board ship, and could be of great service outside of the engine room.

The duties assigned to the carpenter on board a modern ship require him to be much more of a machinist than a carpenter, and a warrant engineer would be advantageously assigned his duties. The increase in cost for maintaining the proposed corps of warrant engineers would be about \$300 per man greater than the cost of the machinists whose places they are intended to take. There is no doubt that the best men of the class desired can be obtained for the pay, life positions, and retired list that are offered. The desirability of this proposed change is based upon the thoroughly established fact that a practical, first-class mechanic, that has spent his whole professional life in handling machinery, is a better man for handling an engine and making such repairs as are possible on board ship than a commissioned engineer, whose practical experience is decidedly limited, no matter how profound may be his theoretical knowledge of an engine.

A corps of ordnance machinists is provided on account of the demand for such a class of men to repair and keep in order the complicated hydraulic and other machinery connected with turrets and heavy ordnance. They are only needed on battle ships and the larger types of cruisers; so only a small number is required. The bill provides for the transfer of the 23 junior engineer officers to the line, and for gradual reduction and limited entries until the corps is reduced to 80. The proposed change greatly improves the status of officers of the engineer corps, and assigns to them duties consistent with their education and acquirements.

There is apparently no sound reason for corps of professors and civil engineers in the Navy, who receive a large annual pay and have all the privileges of the retired list. The professors are nearly all employed at the Naval Observatory. The work of this observatory is national in character, and as constant changes of superintendents, unavoidable under the present system, greatly interferes with its proper administration, as Secretary Tracy stated in his last two annual reports, it is recommended that it be transferred to another department of the Government. The work now performed by civil engineers can be done as efficiently by officers of the line or construction corps.

It is recommended that the chaplains be reduced to 15, as that would allow a sufficient number to supply all flagships and shore stations.

It is recommended that there be no further appointments of sail-makers, boatswains, carpenters, and mates, as their services are not required on modern vessels.

To summarize the general provisions of the bill, so far as officers and men are concerned, it gradually abolishes two sea-going and two shore-staying corps of commissioned officers, reduces two sea-going staff-corps, and adds slightly to the executive branch of the Navy, making the organization of the Navy much more homogeneous and adding greatly to the fighting efficiency on board ship, causing a total reduction of 275 commissioned officers which represents a final annual saving under the present pay table of about \$680,000.

Three of the present corps of warrant officers and the mates are

gradually abolished, a total of 125 men, and two new corps are authorized, the numbers not limited, but probably about 400 would be required and would cost annually about \$300 more per man than the machinists whom they are intended to displace. As the saving from the reduction of 125 warrant officers and mates would amount finally to about \$175,000 annually, there would be no increased cost resulting from the proposed changes among warrant officers.

The changes proposed among the enlisted men are to displace the 1,000 marines at sea by 2,000 sailors, and to perform the guard duty on shore, now done by 1,000 marines, by enlisted men of the Navy and a corps of watchmen. The final annual saving from abolishing the enlisted men and civil establishment of the Marine Corps would be something more than \$800,000, which is a sufficient amount to provide the additional 2,000 enlisted men for the Navy and the corps of watchmen.

In connection with the proposed plan of reorganization a pay-table is presented for all the sea-going corps, which is based *entirely* upon *length of service* as commissioned officers. It includes all grades excepting the flag grade, the pay of which remains the same as that now provided by law. The basis selected is \$1,400 at date of first commission with an annual increase of \$80 for each succeeding year of service on the active list. Under this table rate of promotion, which must necessarily vary in the different corps, does not affect the pay. All officers entering the naval service as commissioned officers in the same year received the same pay without regard to rank or grade. Under such a system of pay no contention can be rightly made as to its fairness; the only point open to discussion is the basis selected; the officers who have their pay reduced by it may claim that the proposed basis and increase are too low.

The only allowance provided for is to increase the pay of commanding officers of seagoing vessels by 10 per cent on account of their having to keep up a single mess, which causes them greater expense than other officers of their rank or relative rank. It is also proposed to give an allowance of \$200 per year to paymasters in order to cover the cost of their bond for faithful performance of duty, should they be required to continue furnishing such a bond.

The proposed pay bill affects the pay of the several corps as follows: Increases the total pay of the line \$317,000, and the engineer corps \$55,000; the medical corps is decreased by \$8,000, and the pay corps by \$18,000. The inequalities shown represent the unfairness of the present pay table, and show that at the present time the active list of the line officers of the Navy receive much less average pay than the several staff corps. The causes which have led to this are very simple and easily explained. A glance at the present pay table, established in 1870, shows that in the line it was based almost entirely upon *rank*, there being no longevity increase in any single grade of more than \$200. The pay of the staff corps was based largely upon *length of service*, officers after reaching the grades of surgeon, paymasters, and chief engineer, being allowed four separate longevity increases to their pay, increasing it from \$2,800 to \$4,200 at sea, and from \$2,400 to \$4,000 on shore. Consequently the pay of the staff corps has not been greatly affected by the stagnation in promotion, while the pay of the line has been directly affected by it.

The following table, based upon the Navy Registers of 1869, 1881, and 1893, shows how the several grades in the different corps have been affected by the two acts passed in 1870 and 1882. It shows, so far as

the line is concerned, that just previous to the act of 1870, 64 per cent of the officers on the active list were in the superior grades. The act of 1870 largely increased the number in the inferior grades, so that in 1881, just previous to the passage of the act of 1882, there were only 35 per cent of the active list in the superior grades. The act of 1882 decreased the number in the superior grades still further, leaving at the present time only 30 per cent in the superior grades. This means that an officer of the line in 1869, starting at the bottom of the active list and going strictly by seniority to the top, the grades remaining unchanged, would have performed approximately 36 per cent of his service in the inferior grades, and 64 per cent in the superior grades; and now that he performs 70 per cent in the inferior grades and only 30 per cent in the superior grades. When one considers that the pay of the line officer, unlike that of the staff officer, depends almost entirely upon his grade, this table affords a very simple explanation of the fact that officers of the active list of the line of the Navy receive less pay than any other corps in the military service of the United States, and it also partially shows why the junior officers are now becoming old men before they reach the superior grades.

Rank.	Line.				Medical Corps.				Pay Corps.				Engineer Corps.			
	1869.	1881.	1893.	Proposed.	1869.	1881.	1893.	Proposed.	1869.	1881.	1893.	Proposed.	1869.	1881.	1893.	Proposed.
Rear-admirals	10	12	6	20	...	...	...	...	...	...	...	...	...	...	...	...
Commodores	25	25	10	...	...	...	...	...	...	...	...	...	...	...	...	...
Captains	50	50	45	65	15	15	15	14	12	12	13	11	5	10	10	9
Commanders	88	90	85	80	38	15	15	14	30	13	13	11	39	15	16	9
Lieutenant-commanders	177	80	74	135	27	40	14	24	34	50	27	16	7	45	39	14
Total	350	257	220	300	80	70	44	52	76	75	53	38	51	70	65	32
Lieutenants	34	280	250	260	41	39	51	43	38	25	21	31	97	89	32	27
Junior lieutenants	52	100	75	215	34	43	40	35	24	5	13	26	115	11	39	7
Ensigns	107	100	177	...	19	10	120	...	...	...	8	...	...	37	47	21
Total	193	480	502	475	75	101	131	78	62	50	42	57	212	137	118	48
Grand total	543	737	722	775	155	171	165	130	138	125	95	95	263	207	183	80

PERCENTAGES IN GRADES.

Superior grades	64	35	30	39	51	41	27	40	55	52	56	40	20	31	36	40
Inferior grades	36	65	70	61	49	59	73	60	45	48	44	60	80	69	64	60

Moreover, it should be remembered that officers on the active list of the Navy are constantly ordered from place to place, and, as commanders of fleets, squadrons, and single vessels the expense of unavoidable official entertainment, for which they receive no allowance whatever, is probably greater than any other corps of the Army or Navy.

It may be claimed that the grade rear-admiral increases the average pay of the line on the retired list, and that some corresponding advantages should be accorded to the active list of the staff in the way of pay. But approximate calculations show that, on the contrary, the staff corps would have the advantage of the line, so far as retired pay is concerned, under the proposed system of compulsory retirements in the line.

The following are the calculated average retirements in the line and staff corps, for each year, in percentages of each corps:

	Line.	Staff corps.
	<i>Per cent.</i>	<i>Per cent.</i>
Rear-admirals	* 0·55	.....
Captains	† 0·32	* 1·42
Commanders	† 0·32	.....
Lieutenant-commanders	† 0·32	.....
Total	1·71	1·42

* Age.

† Compulsory.

This shows that while 0·55 per cent of the line would retire each year with rear-admiral's retired pay, 0·84 per cent would retire on the reduced pay of commander and lieutenant-commander; while 1·42 per cent of the staff would annually retire with the pay of captains.

It is recommended that an allowance of 15 per cent of their annual pay be given to officers ordered to perform shore duty and not provided quarters. This is smaller than the allowance for quarters, which has long been given Army and Marine officers. The present system is certainly very unfair, and provides quarters for a part of the officers ordered to shore duty and requiring others to rent houses at their own expense.

An allowance for official entertainments for rear-admirals in command of fleets and squadrons is also recommended, not to exceed \$2,000 per annum, and for which they must furnish vouchers, subject to the approval of the Secretary of the Navy. They must, unavoidably, do a large amount of official entertaining, which they can ill afford to pay out of their private purse. In the English naval service the necessity for such an allowance has long been recognized, the flag officers receiving a table allowance of \$5,000 to \$8,000 per annum, making it a rule that, wherever an officer is placed in a position which carries expense of a public character, that expense is made good to him.

The following is a summary of detailed calculations made to find how the annual appropriations for the maintenance of the Navy would be affected should the proposed bill be enacted into law:

	Amount.	Increase or decrease.
1894	\$370,000	Increase.
1904	196,900	Decrease.
1914	482,900	Do.
Final	546,100	Do.

The estimates above given do not include the proposed allowances for quarters, paymasters, rear-admirals at sea, the retired pay of the enlisted men, nor the decrease in appropriations resulting in a transfer of the Naval Observatory. Should the proposed bill become law, the number of officers on shore duty would be greatly reduced and the number unprovided with quarters would become comparatively small. The necessary appropriations are, roughly estimated, as follows:

For quarters	\$75,000
Paymasters	19,000
Rear-admirals at sea	6,000
Retired pay of enlisted men	100,000
Total	200,000

Decreased by \$54,000 maintenance of Naval Observatory. This would decrease the final annual saving, as shown above, to \$400,000.

With a Navy list of 775 officers, in perfect working order, without compulsory retirement, 10 should reach the age of 62 and retire as rear-admirals each year. In twenty years 200 would be retired.

At the end of that time, taking the average length of life of those retired at 62 to be 10 years, there would be—

55 left drawing the pay of rear-admiral, or	\$247,500
With compulsory retirement—	
4 each year retire as rear-admiral, 80 in all—	
22 left at end of 20 years	99,000
5 each year as captain or commander, in all 100—	
60 would be left at \$3,000	180,000
4 each year as lieutenant-commander, in all 80—	
50 left at \$2,250	112,500
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	391,500
	247,500

Increased pay of retired list	144,000
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Without compulsory retirement the average age of the officers of the Navy would be 41.

Rate of pay, \$2,900×775	\$2,247,500
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With compulsory retirement the average age of the active list would be 37.

Rate of pay, \$2,600×775	\$2,015,000
Decreased pay of active list	224,750
Increased pay of retired list	144,000
Saving	103,750

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